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1993 UPDATE, CHECKLIST OF THE VASCULAR PLANTS OF BRYCE CANYON NATIONAL PARK, UTAH

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ABSTRACT.—An updated checklist of the vascular flora of Bryce Canyon National Park is presented, including 455 species arranged in 232 genera and 73 families. Four species have been added to the park list based on 1991 fieldwork: *Arabis perennans*, *Arceuthobium divaricatum*, *Gentiana parryi*, and *Haplopappus acaulis*. Recent changes in nomenclature have been included, and several species identifications have been corrected. The six largest families are, in decreasing size, Asteraceae, Poaceae, Fabaceae, Brassicaceae, Scrophulariaceae, and Rosaceae. Common names and an index are provided.

Key words: Bryce Canyon National Park, flora, vascular plants.

Recent fieldwork in Bryce Canyon National Park, along with nomenclatural changes in the Utah flora, has necessitated an updated version of the flora of Bryce Canyon National Park, south central Utah. The last published version of this species list is now 12 years old (Buchanan and Graybosch 1981). We offer this revised list hoping it will be useful to researchers currently engaged in vegetation and floristic work in and around the park.

Nomenclature in general follows the Inter-mountain Flora (Cronquist et al. 1972–1990), except for the substitution of the more recent treatment of the Poaceae in Arnow (1987). For those families not yet treated, Welsh et al. (1987) is used. We differ from the above volumes in the delimitation of some families. In particular, we cannot accept the outmoded use of the Polypodiaceae as a “catch-all” group

for the ferns, as fern phylogeny has become increasingly stable over the last few years, and well-established classifications currently exist. We follow Weber (1987), who has provided an analysis of the new classification for regional ferns. Only two genera occur at Bryce Canyon, *Cheilanthes*, in the Sinopteridaceae, and *Pteridium*, in the Hypolepidaceae. We also follow the now well-established classification for the Liliaceae and its allies, which has become generally accepted worldwide (Dahlgren et al. 1985). Hence, in addition to the Liliaceae, we have members of the Agavaceae, Alliaceae, Asparagaceae, Calochortaceae, Convallariaceae, and Melan-thiaceae in the park flora. Although we feel that the alternative classifications of Weber (1987) have much to offer, we think it premature to utilize his system in its entirety, as this would

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necessitate numerous nomenclatural innovations for Utah taxa. Hence, only three genera are accepted that differ from the treatments in *A Utah Flora* and *Intermountain Flora*: *Bistorta* (*Polygonum* in part), *Ipomopsis* (*Gilia* in part), and *Pseudocymopterus* (*Cymopterus* in part). We utilize these because they have been widely accepted in North American floristic work. Finally, we note that there are fundamental differences in nomenclature at the species level for some plants at Bryce Canyon when Welsh et al. (1987) and Weber (1987) are compared; e.g., in *Arabis*, *Euphorbia*, *Solidago*, and *Stephanomeria* among others. We hope that future revisionary work on these taxa will resolve these nomenclatural differences.

We have incorporated the additions to the park flora made by Hallsten and Roberts (1988). Also, four species have been added to the 1981 list based on recent fieldwork and corrections of herbarium material: *Arabis perennans*, *Arctanthobium divaricatum*, *Gentiana parryi*, and *Haplopappus acaulis* (Spence 1992). Several species have either been dropped from the list or replaced by other species, based on misidentifications or changes in our understanding of the taxonomy and distributions of certain taxa in Utah. These are listed in Table 1. The Atlas of the Vascular Plants of Utah (Albee et al. 1988) was consulted for range information. If a species on the 1981 list was not represented in the park herbarium, and was well outside its normal range in Utah based on the atlas, it was excluded. The checklist that follows is orga-

nized alphabetically by family, genus, and species.

Table 2 includes a list of species that have been found around the boundaries of Bryce Canyon National Park but are not yet known from within the park. Future fieldwork is likely to find some of these species in the park.

CHECKLIST OF THE VASCULAR PLANTS OF BRYCE CANYON NATIONAL PARK

ACERACEAE	
1. <i>Acer glabrum</i> Torr.	Rocky Mountain maple
2. <i>A. grandidentatum</i> Nutt.	bigtooth maple
AGAVACEAE	
3. <i>Yucca angustissima</i> Trel.	narrowleaf yucca
4. <i>Y. harrimaniae</i> Trel.	Harriman yucca
ALLIACEAE	
5. <i>Allium acuminatum</i> Hook.	tapertip onion
6. <i>A. nevadense</i> S. Wats.	Nevada onion
AMARANTHACEAE	
7. <i>Amaranthus blitoides</i> Wats.	prostrate pigweed
ANACARDIACEAE	
8. <i>Rhus trilobata</i> Nutt.	squawbush
APLACEAE	
9. <i>Berula erecta</i> (Huds.) Cov.	cutleaf waterparsnip
10. <i>Cicuta maculata</i> L.	water hemlock
11. <i>Cymopterus purpureus</i> Wats.	purple springparsley
12. <i>Ligusticum porteri</i> Coulter & Rose	southern ligusticum
13. <i>Lomatium minimum</i> (Math.) Math.	least biscuitroot

TABLE 1. Changes in species identifications in, and deletions from, the 1981 list of the flora of Bryce Canyon National Park. 1 = outside range, misidentification, deleted from list; 2 = inside range, misidentification, retained in list.

Taxa previously reported	Current justification and status
<i>Acouria nuttallii</i> Pax	(1) no specimen, outside range
<i>Campanula rotundifolia</i> L.	(2) <i>C. parryi</i> Gray
<i>Eriogonum simplex</i> Greene	(2) <i>E. compositus</i> Pursh
<i>Gentianella tenella</i> Roth	(2) <i>G. tortuosa</i> (Jones) J. Gillett
<i>Lomatium nuttallii</i> Gray Macbr.	(2) <i>L. parryi</i> (Wats.) Macbr.
<i>Phlox condensata</i> Gray F. Nels.	(2) <i>P. pulcinata</i> (Wherry) Cronq.
<i>P. diffusa</i> Benth.	(2) <i>P. hoodii</i> Richards
<i>P. tumida</i> Wherry	(2) <i>P. pulcinata</i> (Wherry) Cronq.
<i>Physaria grayi</i> Wherry Gray	(1) no specimen, outside range
<i>Polemonium viscosum</i> Nutt.	(1) no specimen, outside range
<i>Scirpus americanus</i> Pers.	(2) <i>S. pungens</i> Vahl
<i>Senecio cymbalifolius</i> Benth.	(2) <i>S. hartianus</i> Heller
<i>Solidago occidentalis</i> Nutt. F. & G.	(2) <i>S. sparsiflora</i> Gray
<i>Tanacetum nuttallii</i> F. & G.	(2) <i>Sphaeromeria capitata</i> Nutt.
<i>Thelypodium sagittatum</i> (Nutt.) Fernald	(1) no specimen, outside range

TABLE 2. List of species reported from near the boundary of Bryce Canyon National Park, but not yet collected from within the park.

ASCLEPIADACEAE <i>Asclepias cryptoceras</i> Wats.	JUNCACEAE <i>Juncus mertensianus</i> Bong.
ASTERACEAE <i>Artemisia filifolia</i> Torr. <i>Cirsium clavatum</i> (Jones) Petrak <i>C. wheeleri</i> (Gray) Petrak <i>Crepis atrabarba</i> Heller <i>Erigeron aphanactis</i> (Gray) Greene <i>E. lonchophyllus</i> Hook. <i>Haplopappus lanceolatus</i> Hook. <i>H. parryi</i> Gray <i>Hymenoxys depressa</i> (T. & G.) Welsh & Reveal <i>Senecio canus</i> Hook. <i>Solidago nana</i> Nutt. <i>Stephanomeria exigua</i> Nutt.	LAMIACEAE <i>Mentha arvensis</i> L.
BRASSICACEAE <i>Arabis drummondii</i> Gray <i>Lepidium lasiocarpum</i> Nutt. <i>Lesquerella wardii</i> Wats. <i>Thlaspi montanum</i> L.	LINACEAE <i>Linum australe</i> Heller
CAPRIFOLIACEAE <i>Lambucus racemosa</i> L.	ORCHIDACEAE <i>Habenaria hyperborea</i> (L.) R.Br.
CYPERACEAE <i>Carex egglestonii</i> Mack. <i>C. petasata</i> Dewey <i>C. simulata</i> Mack.	PINACEAE <i>Abies lasiocarpa</i> (Hook.) Nutt. <i>Picea engelmannii</i> Engelm.
EPHEDRACEAE <i>Ephedra viridis</i>	POACEAE <i>Lolium perenne</i> L.
FABACEAE <i>Astragalus lentiginosus</i> Hook. <i>A. wardii</i> Gray <i>Trifolium kingii</i> Wats.	POLEMONIACEAE <i>Leptodactylon caepitosum</i> Nutt.
GROSSULARIACEAE <i>Ribes montigenum</i> McClat.	POLYGONACEAE <i>Eriogonum arctioides</i> Barnaby
HYPERICACEAE <i>Hypericum formosum</i> H.B.K.	RANUNCULACEAE <i>Caltha leptosepala</i> DC.
IRIDACEAE <i>Sisyrinchium idahoense</i> Bickn.	ROSACEAE <i>Amelanchier alnifolia</i> Nutt. <i>Ivesia kingii</i> Wats.
	SALICACEAE <i>Salix boothii</i> Dorn
	SCROPHULARIACEAE <i>Cordylanthus wrightii</i> Gray <i>Pedicularis groenlandica</i> Retz. <i>Penstemon laevis</i> Pennell <i>P. procerus</i> Graham
	SOLANACEAE <i>Datura stramonium</i> L. <i>Nicotiana attenuata</i> Wats.
	SPARGANIACEAE <i>Sparganium eurycarpum</i> Engelm.
	VIOLACEAE <i>Viola nephrophylla</i> Greene

14. <i>L. parryi</i> (Wats.) Macbr.	Parry biscuitroot	18. <i>A. speciosa</i> Torr.	showy or common milkweed
15. <i>Pseudocymopterus montanus</i> (Gray) Coult. & Rose	mountain parsley		
		ASPARAGACEAE	
16. <i>Apocynum androsaemifolium</i> L.	spreading dogbane	19. <i>Asparagus officinalis</i> L.	asparagus
		ASTERACEAE	
		20. <i>Achillea lanulosa</i> Nutt.	yarrow
17. <i>Asclepias asperula</i> (Dcne.) Woodson	spider milkweed	21. <i>Agoseris aurantiaca</i> (Hook.) Greene	orange agoseris

- var. *aurea* Nutt.
 var. *purpurea* (Gray) Greene
 22. *Agoseris glauca* (Pursh)
 D. Dietr. mountain dandelion
 var. *parviflora* (Nutt.) Rydb.
 23. *Antennaria dimorpha* (Nutt.)
 T. & G. low pussytoes
 24. *A. microphylla* Rydb. rosy pussytoes
 25. *A. parvifolia* Nutt. small-leaf pussytoes
 26. *A. rosulata* Rydb. woolly pussytoes
 27. *Arnica chamissonis* Less. Chamisso arnica
 28. *A. cordifolia* Hook. heartleaf arnica
 29. *Artemisia campestris* L. field sagewort
 30. *A. carruthii* Wood ex Carruth Carruth sagewort
 31. *A. dracunculoides* L. tarragon
 32. *A. frigida* Willd. fringed sagewort
 33. *A. ludoviciana* Nutt. foothill sagebrush
 34. *A. nova* A. Nels. black sagebrush
 35. *A. pygmaea* Gray pigmy sagebrush
 36. *A. tridentata* Nutt. big sagebrush
 37. *Aster chilensis* Nees Pacific aster
 38. *A. cantonii* (Gray) Howell Eaton aster
 39. *A. glaucoideus* Blake blueleaf aster
 40. *A. occidentalis* (Nutt.) Torr.
 & Gray western aster
 41. *Balsamorhiza sagittata* (Pursh)
 Nutt. arrowleaf balsamroot
 42. *Brickellia oblongifolia* Nutt. Mojave brickellbush
 43. *Centaurea repens* L. Russian knapweed
 44. *Chaenactis douglasii* (Hook.)
 H. & A. Douglas dustymaiden
 45. *Chrysothamnus depressus*
 Nutt. dwarf rabbitbrush
 46. *C. linifolius* Greene spreading rabbitbrush
 47. *C. nauscosus* (Pallas) Britt. rubber rabbitbrush
 var. *glabratus* (Gray) Cronq.
 48. *C. parryi* (Gray) Greene Parry rabbitbrush
 49. *C. vaseyi* (Gray) Greene Vasey rabbitbrush
 50. *C. viscidiflorus* (Hook.) Nutt. mountain rabbitbrush
 51. *Cirsium arizonicum* (Gray)
 Petrak Arizona thistle
 var. *arizonicum*
 var. *nicholii* (Jones) Welsh
 52. *C. calcareum* (Jones) Woot.
 & Standl. limestone thistle
 var. *pulchellum* (Greene)
 Welsh
 53. *C. neomexicanum* Gray New Mexico thistle
 54. *C. undulatum* (Nutt.) Sprengel wayleaf thistle
 55. *C. vulgare* Savi Ten. bull thistle
 56. *Comiza canadensis* L. Cronq. Canada horseweed
 57. *Crepis intermedia* Gray Gray hawkbeard
 58. *C. occidentalis* Nutt. western hawkbeard
 59. *C. runcinata* (James) T. & G.
 var. *glauca* (Nutt.) Babcock
 & Stebbins meadow hawkbeard
 60. *Erigeron abapensis* Cronq. Abajo fleabane
 61. *E. canus* Gray hoary fleabane
 62. *E. compositus* (Pursh) f. ruleaf fleabane
 63. *E. divergens* T. & G. spreading fleabane
 64. *E. cantonii* Gray Eaton fleabane
 65. *E. flagellaris* Gray trailing fleabane
 66. *E. pumilus* Nutt. low fleabane
 ssp. *concinoides* Cronq.
 67. *E. speciosus* (Lindl.) DC. Oregon fleabane
 68. *E. ursinus* D.C. Eaton bear fleabane
 69. *E. vagus* Payson wandering fleabane
 70. *Grindelia squarrosa* (Pursh)
 Dunal curlycup gumweed
 71. *Gutierrezia sarothrae*
 (Pursh) Britt. & Rusby broom snakeweed
 72. *Haplopappus acaulis* (Nutt.)
 Gray stemless goldenweed
 73. *H. armerioides* (Nutt.) Gray thrifty goldenweed
 74. *H. scopulorum* (Jones)
 Blake Rocky Mountain
 goldenweed
 75. *H. zionis* L.C. Anderson Cedar Breaks
 goldenweed
 76. *Helianthella uniflora*
 (Nutt.) T. & G. little sunflower
 77. *Helianthus annuus* L. common sunflower
 78. *Helomeris multiflora* Nutt. showy goldeneye
 79. *Heterotheca jonesii* (Blake)
 Welsh & Atwood Jones goldenaster
 80. *H. villosa* (Pursh) Shimm. hoary goldenaster
 81. *Hymenopappus filifolius* Hook.
 var. *cinerus* hymenopappus
 var. *lugens* (Greene) Jeps.
 82. *Hymenoxys acaulis* (Pursh)
 Parker stemless woollybase
 83. *H. richardsonii* (Hook.)
 Cockerall Colorado rubberplant
 84. *Iva axillaris* Pursh poverty sumpweed
 85. *Lactuca serriola* L. prickly lettuce
 86. *L. taractica* (L.) C.A. May
 ssp. *pulchella* (Pursh) blue lettuce
 Stebbins
 87. *Leucclene ericoides* (Torr.)
 Greene rose heath
 88. *Lygodesmia grandiflora*
 (Nutt.) T. & G. showy rushpink
 89. *Machaeranthera canescens*
 (Pursh) Gray hoary tansyaster
 90. *M. grindelioides* (Nutt.)
 Shimmers gumweed tansyaster
 91. *M. linearis* Greene tansy aster
 92. *Petroradia pumila* (Nutt.)
 Greene rock goldenrod
 93. *Senecio atratus* Greene black groundsel
 94. *S. hartianus* Heller Hart groundsel
 95. *S. hydrophilus* Nutt. water groundsel
 96. *S. multilobatus* T. & G. Uintah groundsel
 97. *S. spartioides* T. & G. broom groundsel
 98. *Solidago spatulata* DC. coast goldenrod
 99. *S. parryi* (Gray) Greene Parry goldenrod
 100. *S. sparsiflora* Gray few-flowered
 goldenrod
 101. *Sphaeromeria capitata*
 Nutt. sphaeromeria

102. *Stephanomeria spinosa*
(Nutt.) Toml. thorn wirelettuce
103. *S. tenuifolia* (Torr.) Hall slenderleaf wirelettuce
104. *Taraxacum officinale*
Weber common dandelion
105. *Tetradymia canescens* DC. Gray horsebrush
106. *Townsendia exscapa*
(Richards) Porter stemless townsendia
107. *T. incana* Nutt. hoary townsendia
108. *T. minima* Eastw. least townsendia
109. *Tragopogon dubius* Scop. yellow salsify
110. *Verbesina encelioides*
(Cav.) Benth. & Hook. golden crownbeard
- BERBERIDACEAE
111. *Mahonia fremontii* (Torr.)
Fedde Fremont mahonia
112. *M. repens* (Lindl.) G. Don Oregon grape
- BETULACEAE
113. *Betula occidentalis* Hook. western water birch
- BORAGINACEAE
114. *Cryptantha abata* I.M.
Johnston low cryptanth
115. *C. bakeri* (Greene) Payson Baker cryptanth
116. *C. confertifolia* (Greene)
Payson golden cryptanth
117. *C. fendleri* (Gray) Greene sand dune cryptanth
118. *C. flava* (Nels.) Payson yellow cryptanth
119. *C. fulvocanescens* (Gray)
Payson plateau cryptanth
120. *C. humilis* (Greene)
Payson roundspike cryptanth
121. *C. jamesii* (Torr.) Payson James cryptanth
122. *C. ochroleuca* Higgins yellowish cryptanth
123. *C. setosissima* (Gray)
Payson bristly cryptanth
124. *Lappula occidentalis*
(Wats.) Greene western stickseed
125. *Lithospermum incisum*
Lehm. showy stickseed
126. *L. multiflorum* Torr. southwestern stickseed
127. *Mertensia arizonica*
Greene aspen bluebell
- BRASSICACEAE
128. *Arabis demissa* Greene rockcress
129. *A. holboellii* Hornem. Holboell rockcress
- var. *fendleri* Wats.
- var. *holboellii*
130. *A. perennans* Wats. common rockcress
131. *Capsella bursa-pastoris*
(L.) Medie shepherd's purse
132. *Caulanthus crassicaulis*
(Torr.) S. Wats. thickstem wildecabbage
133. *Conringia orientalis* (L.)
Dumort hare's ear mustard
134. *Descurainia richardsonii*
(Sweet) O.E. Schulz Richardson
tansymustard
135. *D. sophia* (L.) Webb flaxweed
136. *Draba subalpina* Goodman
& Hitchc. breaks draba
137. *Erysimum asperum* (Nutt.)
DC. western wallflower
138. *E. inconspicuum* (S. Wats.)
MacMill small wallflower
139. *Lepidium densiflorum*
Schrud. prairie pepperweed
140. *L. montanum* Nutt. mountain pepperweed
141. *Lesquerella intermedia*
(S. Wats.) Heller Watson bladderpod
142. *L. kingii* S. Wats. King bladderpod
- var. *parvifolia* Maguire
& Holmgren Welsh &
Reveal
143. *L. rubicundula* Rollins breaks bladderpod
144. *Mulcobaia africana* (L.) R. Br. African mustard
145. *Physaria chambersii* Rollins Chamber twinpod
146. *P. newberryi* Gray Newberry twinpod
147. *Schoenocrambe linifolia*
(Nutt.) Greene schoenocrambe
148. *Stanleya pinnata* (Pursh)
Britton prince's plume
149. *Streptanthus cordatus* Nutt. twistflower
150. *Thelypodium sagittatum*
(Nutt.) Endl. arrowleaf thelypody
- var. *ovalifolium* (Rydb.)
Welsh & Reveal
151. *Thlaspi arvense* L. field pennycress
- CACTACEAE
152. *Echinocereus*
triglochidiatus Engelm. claret cup
153. *Opuntia crinacea* Engelm.
& Bigel. grizzlybear pricklypear
154. *Pediocactus simpsonii*
(Engelm.) Britt. & Rose Simpson pediocactus
155. *Sclerocactus uchiiplei*
(Engelmann, & Bigel.)
Britt. & Rose fishhook cactus
- CALOCHORTACEAE
156. *Calochortus nuttallii* T. & G. sego lily
- CAMPANULACEAE
157. *Campanula parryi* Gray Parry bellflower
- CAPPARACEAE
158. *Cleome lutea* Hook. yellow beeplant
- CAPRIFOLIACEAE
159. *Sambucus racemula* Raf. blue elderberry
160. *Symphoricarpos oreophilus*
Gray mountain snowberry
- CARYOPHYLLACEAE
161. *Arenaria fendleri* A. Gray Fendler sandwort
162. *Lynchnis drummondii*
Hook. S. Wats. Drummond catchfly

163. *Parnassia sessiliflora* Nutt. creeping nailwort
 164. *Silene petersonii* Maguire Peterson campion
 var. *minor* C. L. Hitchc. & Maguire
 165. *Stellaria jamesiana* Torr. James chickweed
 166. *S. longipes* Goldie longstalk chickweed
- CELASTRACEAE
167. *Paxistima myrsinites* (Pursh) Raf. mountain lover
- CHENOPODIACEAE
168. *Atriplex canescens* Pursh Nutt. fourwing saltbush
 169. *A. confertifolia* Torr. & Frem. Wats. shadscale
 170. *A. gardneri* Moq. D. Dietr. Gardner saltbush
 var. *tridentata* (Kuntze) MacBr.
 171. *Chenopodium atrovirens* Rydb. mountain goosefoot
 172. *C. fremontii* Wats. Fremont goosefoot
 var. *incanum* Wats.
 173. *C. leptophyllum* Nutt. narrowleaf goosefoot
 174. *Eurotia lanata* (Pursh) Moq. winterfat
 175. *Salsola iberica* Semmen & Pau Russian thistle
 176. *Sarcobatus vermiculatus* (Hook.) Torr. greasewood
- CONVALLARIACEAE
177. *Smilacina stellata* (L.) Desf. starry false Solomon seal
- CONVOLVULACEAE
178. *Convolvulus arvensis* L. field bindweed
- CORNACEAE
179. *Cornus stolonifera* Michx. red-osier dogwood
- CUPRESSACEAE
180. *Juniperus communis* L. common juniper
 181. *J. osteosperma* (Torr.) Little Utah juniper
 182. *J. scopulorum* Sarg. Rocky Mountain juniper
- Cyperaceae
183. *Carex athrotachya* Olney slenderbeak sedge
 184. *C. aurca* Nutt. golden sedge
 185. *C. canescens* L. pale sedge
 186. *C. douglasii* Boott Douglas sedge
 187. *C. microcarpa* Alke smallwing sedge
 188. *C. nebrascensis* Dewey Nebraska sedge
 189. *C. oederi* (L.) green sedge
 190. *C. praegracilis* (W. & A.) Black creeper sedge
 191. *C. rossii* F. Boott Ross sedge
 192. *C. rostrata* Stokes beaked sedge
193. *C. stenophylla* Wahl. narrowleaf sedge
 194. *Eleocharis palustris* (L.) R. & S. common spikerush
 195. *E. pauciflorus* (Lightf.) Link spikerush
 196. *E. rostellata* (Torr.) Torr. beaked spikerush
 197. *Scirpus pungens* Pers. common threesquare bulrush
- ELAEAGNACEAE
198. *Shepherdia argentea* (Pursh) Nutt. silver buffaloberry
 199. *S. canadensis* (L.) Nutt. russet buffaloberry
 200. *S. rotundifolia* Parry roundleaf buffaloberry
- EQUISETACEAE
201. *Equisetum arvense* L. field horsetail
 202. *E. laevigatum* A. Br. smooth horsetail
- ERICACEAE
203. *Arctostaphylos patula* Greene greenleaf manzanita
 204. *A. uva-ursi* (L.) Spreng. bearberry
- EUPHORBACEAE
205. *Euphorbia brachycera* Engelm. shorthorn spurge
 206. *E. fendleri* T. & G. Fendler spurge
- FABACEAE
207. *Astragalus agrestis* G. Don field milkvetch
 208. *A. amphioxys* Gray crescent milkvetch
 209. *A. argophyllum* T. & G. silverleaf milkvetch
 210. *A. bisulcatus* (Hook.) Gray two-grooved milkvetch
 211. *A. calycosus* Wats. Torrey milkvetch
 212. *A. convallarius* Greene timber milkvetch
 213. *A. hallii* Gray Hall milkvetch
 214. *A. humistratus* Gray groundcover milkvetch
 215. *A. kentrophyta* Gray kentrophyta
 216. *A. lonchocarpus* Torr. great rushy milkvetch
 217. *A. megacarpus* (Nutt.) Gray great bladder milkvetch
 218. *A. miser* Hook. weedy milkvetch
 219. *A. tenellus* Pursh pulse milkvetch
 220. *Hedysarum boreale* Nutt. northern sweetvetch
 221. *Lathyrus brachycalyx* Rydb. purple peavine
 222. *Lotus utahensis* Otley Utah trefoil
 223. *Lupinus argenteus* Pursh silvery lupine
 var. *argenteus*
 var. *rubricaulis* (Greene) Welsh
 224. *L. kingii* S. Wats. King lupine
 225. *L. sericeus* Pursh silky lupine
 226. *Medicago lupulina* L. black medic
 227. *M. sativa* L. alfalfa

228. *Melilotus officinalis* (L.)
Pall. yellow sweetclover
229. *Oxytropis deflexa* (Pall.)
DC. hangpod locoweed
var. *sericea* T. & G.
230. *O. oreophila* Gray mountain locoweed
231. *Pedicularis parviflora*
(Wells & Atwood)
J. Grimes Paria breadroot
232. *Trifolium repens* L. white clover
233. *Vicia americana* Willd. American vetch
- FAGACEAE
234. *Quercus gambelii* Nutt. Gambel oak
- FUMARIACEAE
235. *Corydalis aurea* Willd. golden corydalis
- GENTIANACEAE
236. *Fraseria speciosa* Griseb. elkweed
237. *Gentiana affinis* Griseb. Rocky Mountain
gentian
238. *G. parryi* Engelm. Parry gentian
239. *Gentianella heterosepala*
(Engelm.) Holub Engelmann gentian
240. *G. tortuosa* (Jones)
J. Gillett Jones gentian
241. *Gentianopsis decurva*
(Roth.) Ma fringed gentian
- GERANIACEAE
242. *Geranium caespitosum*
James small-leaf geranium
243. *G. richardsonii* Fisch. &
Trautv. Richardson geranium
- GROSSULARIACEAE
244. *Ribes aureum* Pursh golden currant
245. *Ribes cereum* Dougl. wax or squaw currant
- HYPOLEPIDACEAE
246. *Pteridium aquilinum*
(L.) Kuhn bracken fern
- IRIDACEAE
247. *Iris missouriensis* Nutt. Missouri iris
248. *Sisyrinchium demissum*
Greene blue-eyed grass
- JUNCACEAE
249. *Juncus arcticus* Willd. wiregrass
250. *J. bufonius* L. toad rush
251. *J. ensifolius* Wikstr. swordleaf rush
252. *J. longistylis* Torr. longstyle rush
253. *J. torreyi* Coville Torrey rush
- JUNCAGINACEAE
254. *Triglochin maritima* L. maritime
arrowgrass
255. *T. palustris* L. marsh arrowgrass
- LAMIACEAE
256. *Dracocephalum parviflorum*
Nutt. American dragonhead
257. *Hedeoma drummondii*
Benth. mock penny royal
258. *Marrubium vulgare* L. hoarhound
259. *Monarda odoratissima*
Benth. cloverhead horsemint
260. *Prunella vulgaris* L. selfheal
- LILIACEAE
261. *Fritillaria atropurpurea*
Nutt. leopard lily
262. *Leucocrinum montanum*
Nutt. ex Gray star lily
- LINACEAE
263. *Linum aristatum* Engelm. broom flax
264. *L. kingii* Wats. King flax
265. *L. lewisii* Pursh blue flax
- LOASACEAE
266. *Mentzelia multiflora*
(Nutt.) Gray desert blazing star
- MALVACEAE
267. *Sphaeralcea coccinea*
(Pursh) Rydb. scarlet globemallow
268. *S. parvifolia* A. Nels. small-flowered
globemallow
- MENANTHACEAE
269. *Zigadenus elegans* Pursh mountain death
camas
- NYCTAGINACEAE
270. *Abronia fragrans* Hook. fragrant sand verbena
271. *A. nana* Wats. low sand verbena
- ONAGRACEAE
272. *Calylophus lavandulifolius*
(T. & G.) Raven lavender evening
primrose
273. *Epilobium angustifolium* L. fireweed
274. *E. ciliatum* Raf. northern willowherb
275. *Gayoplytium*
ramosissimum T. & G. branchy
groundsmoke
276. *G. racemosum* T. & G. kitchenweed
277. *Oenothera caespitosa* Nutt. tufted evening
primrose
278. *O. coronopifolia* T. & G. rootstalk evening
primrose
279. *O. flava* (A. Nels.) Garrett yellow evening
primrose
280. *O. howardii* A. Nels.
W.L. Wagner bronze evening
primrose
281. *O. longissima* Rydb. Bridges evening
primrose

282. *O. pallida* Lindl. pale evening primrose
- ORCHIDACEAE
283. *Corallorhiza maculata* Raf. spotted coralroot
284. *C. striata* Lindl. striped coralroot
285. *Epipactis gigantea* Dougl. ex Hook. giant helleborine
286. *Habenaria dilatata* (Pursh) Hook. white bog orchid
287. *H. sparsiflora* S. Wats. Watson bog orchid
- OROBANCHACEAE
288. *Orobancha fasciculata* Nutt. clustered broomrape
- PINACEAE
289. *Abies concolor* (Gord. & Glend.) Lindl. white fir
290. *Picea pungens* Engelm. blue spruce
291. *Pinus edulis* Engelm. two-needle pinyon
292. *P. flexilis* James limber pine
293. *P. longaeva* D. K. Bailey bristlecone pine
294. *P. ponderosa* Laws. ponderosa pine
295. *Pseudotsuga menziesii* (Mirb.) Franco Douglas fir
- PLANTAGINACEAE
296. *Plantago eriopoda* Torr. woolly-foot plantain
297. *P. lanceolata* L. English plantain
- POACEAE
298. *Agropyron cristatum* (L.) Gaertn. crested wheatgrass
299. *Agrostis stolonifera* L. carpet bentgrass
300. *Aristida purpurea* Nutt. purple threeawn
301. *Bouteloua gracilis* H.B.K. Lag. ex Steudel blue grama
302. *Bromus anomalus* Rupr. ex Fourn. nodding brome
303. *B. carinatus* H. & A. mountain brome
304. *B. ciliatus* L. fringed brome
305. *B. inermis* Leysser smooth brome
306. *B. japonicus* Thunb. ex Murray meadow brome
307. *B. tectorum* L. cheatgrass
308. *Calamagrostis scopulorum* M.E. Jones Jones reedgrass
309. *C. stricta* (Tuckerm.) Koeler slimstem reedgrass
310. *Dactylis glomerata* L. orchard grass
311. *Deschampsia cespitosa* L. Beauv. tufted hairgrass
312. *Elymus canadensis* L. Canada wildrye
313. *E. elymoides* Raf. Swezey squirrel tail
314. *E. glaucus* Buckley blue wildrye
315. *E. juncea* Fisch. Russian wildrye
316. *E. lanceolatus* Scribn. & Sm. Gould thickspike wheatgrass
317. *E. salinus* Torr. Salina wildrye
318. *E. scribneri* (Wats.) Chase spreading wheatgrass
319. *E. smithii* (Rydb.) Gould western wheatgrass
320. *E. spicatus* (Pursh) Gould bluebunch wheatgrass
321. *E. trachycaulis* (Link) Gould ex Shimmers slender wheatgrass
322. *Festuca octoflora* Walter six weeks fescue
323. *F. ovina* L. sheep fescue
324. *F. pratensis* Hudson meadow fescue
325. *Glyceria striata* (Lam.) A.S. Hitchc. fowl mannagrass
326. *Hilaria jamesii* (Torr.) Benth. galleta
327. *Hordeum brachyantherum* Nevski meadow barley
328. *H. jubatum* L. foxtail barley
329. *Koeleria macrantha* (Ledeb.) Schultes Junegrass
330. *Muhlenbergia andina* (Nutt.) A.S. Hitchc. foxtail muhly
331. *M. asperifolia* (Nees & Meyer) L.R. Parodi scratchgrass
332. *M. montana* (Nutt.) A.S. Hitchc. mountain muhly
333. *M. pungens* Thurber sandhill muhly
334. *M. richardsonii* (Trin.) Rydb. mat muhly
335. *Oryzopsis micrantha* (Trin. & Rupr.) Thurber littleseed ricegrass
336. *Phleum pratense* L. timothy
337. *Poa compressa* L. Canada bluegrass
338. *P. fendleriana* (Steudel) Vasey muttongrass
339. *P. pratensis* L. Kentucky bluegrass
340. *P. reflexa* Vasey & Scribn. nodding bluegrass
341. *P. secunda* Presl. Sandberg bluegrass
342. *Puccinellia nuttalliana* (Schultes) A.S. Hitchc. Nuttall alkaligrass
343. *Schizachyrium scoparium* (Michx.) Nash little bluestem
344. *Sporobolus airoides* (Torr.) Torr. alkali sacaton
345. *S. cryptandrus* (Torr.) Gray sand dropseed
346. *Stipa comata* Trin. & Rupr. needle-and-thread
347. *S. hymenoides* R. & S. Indian ricegrass
348. *S. lettermanii* Vasey Letterman needlegrass
349. *S. nelsonii* Scribn. Nelson needlegrass
350. *S. pinetorum* Jones pinewoods needlegrass
- POLEMONIACEAE
351. *Ipomopsis aggregata* (Pursh) V. Grant scarlet gilia, skyrocket
352. *I. congesta* (Hook.) V. Grant ballhead gilia
353. *Leptodactylon pungens* (Torr.) Nutt. prickly phlox
354. *Linanthus nuttallii* (Gray) Ewan Nuttall flaxflower
355. *Phlox austromontana* Cov. desert phlox
356. *P. hoodii* Richards. carpet phlox
357. *P. longifolia* Nutt. longleaf phlox
358. *P. muscoides* Nutt. moss phlox

359. *P. pulcinata* (Wherry) Cronq. cushion phlox
 360. *Polemonium caeruleum* L. western Jacobs ladder
- POLYGONACEAE
 361. *Bistorta vivipara* (L.) S. Gray American bistort
 362. *Eriogonum alatum* Torr. winged buckwheat
 363. *E. corymbosum* Benth. Corymb buckwheat
 364. *E. microthecum* Nutt. slender buckwheat
 var. *foliosum* (T. & G.) Reveal
 365. *E. panguicense* (M.E. Jones) Reveal Panguitch buckwheat
 366. *E. racemosum* Nutt. redroot buckwheat
 367. *E. subreniforme* S. Wats. Stokes buckwheat
 368. *E. umbellatum* Torr. sulphur buckwheat
 var. *subaridum* Stokes
 369. *Polygonum aviculare* L. knotweed
 370. *P. douglasii* Greene Douglas knotweed
 var. *johnstonii* Munz
 371. *P. ramosissimum* Michx. bushy knotweed
 372. *Rumex crispus* L. curly dock
 373. *R. salicifolius* Weinm. beach dock
 var. *triangulivalis* Danser.
- PRIMULACEAE
 374. *Androsace septentrionalis* L. pygmy-flower rockjasmine
 375. *Dodecatheon pulchellum* (Raf.) Merrill pretty shooting star
- PYROLACEAE
 376. *Pyrola asarifolia* Michx. liverleaf wintergreen
 377. *P. virens* Schweigg. green wintergreen
 378. *Pteropora andromedea* Nutt. pinedrops
- RANUNCULACEAE
 379. *Aconitum columbianum* Nutt. monkshood
 380. *Anemone multifida* Poir. globeflower
 381. *Aquilegia caerulea* James Colorado columbine
 382. *A. scopulorum* Tides. rock columbine
 383. *Clematis columbiana* (Nutt.) T. & G. Rocky Mountain clematis
 384. *C. ligusticifolia* Nutt. white virgin's bower
 385. *Delphinium andersonii* Gray Anderson larkspur
 var. *scaposum* (Greene) Welsh
 386. *Ranunculus cymbalaria* Pursh marsh buttercup
 387. *R. flammula* L. spearwort
 388. *R. inamoenus* Greene drab buttercup
 389. *Thalictrum fendleri* Engelm. Fendler meadowrue
- RHAMNACEAE
 390. *Ceanothus fendleri* Gray Fendler mountain lilac
 391. *C. martinii* M.E. Jones Utah mountain lilac
- ROSACEAE
 392. *Anemone utahensis* Koehne Utah serviceberry
 393. *Cercocarpus ledifolius* Nutt. curleaf mountain mahogany
 394. *C. montanus* Raf. alder leaf mountain mahogany
 395. *Fallugia paradoxa* (D. Don) Endl. Apache plum
 396. *Fragaria virginiana* Duchesne mountain strawberry
 397. *Holodiscus dumosus* (Hook.) Heller bush ocean spray
 398. *Ivesia sabulosa* (M.E. Jones) Keck Sevier ivesia
 399. *Peraphyllum ramosissimum* Nutt. squaw-apple
 400. *Potentilla anserina* L. silverweed cinquefoil
 401. *P. concinna* Richards pretty cinquefoil
 402. *P. crinita* Gray bearded cinquefoil
 403. *P. fruticosa* L. shrubby cinquefoil
 404. *P. gracilis* Dougl. slender cinquefoil
 var. *pulcherrima* (Lehm.) Fern.
 405. *P. plattensis* Nutt. cinquefoil
 406. *Prunus virginiana* L. chokecherry
 407. *Purshia mexicana* (D. Don) Welsh cliffrose
 408. *P. tridentata* (Pursh) DC. bitterbrush
 409. *Rosa nutkana* Presl. Nutka rose
 410. *R. woodsii* Lindl. Woods rose
 411. *Rubus idaeus* L. raspberry
 var. *sachalinensis* (Levl.) Focke
- RUBIACEAE
 412. *Galium trifidum* L. small bedstraw
 413. *Kelloggia galioides* Torr. kelloggia
- SALICACEAE
 414. *Populus angustifolia* James narrowleaf cottonwood
 415. *P. fremontii* S. Wats. Fremont cottonwood
 416. *P. tremuloides* Michx. quaking aspen
 417. *Salix bebbiana* Sarg. Bebb willow
 418. *S. drummondiana* Barratt Drummond willow
 419. *S. exigua* Nutt. narrowleaf willow
 420. *S. geyeriana* Anderss. Geyer willow
 421. *S. lasiandra* Benth. whiplash willow
 var. *caudata* (Nutt.) Sudw.
- SANTALACEAE
 422. *Comandra umbellata* (L.) Nutt. bastard toadflax
- SAMBRAGACEAE
 423. *Lithophragma tenella* Nutt. slender woodland star

424. *Parnassia palustris* L. northern grass-of-Parnassus
- SCROPHULARIACEAE
425. *Castilleja chromosa* A. Nels. desert paintbrush
426. *C. linariifolia* Benth. Wyoming paintbrush
427. *C. revelii* N. Holmgren Bryce Canyon paintbrush
428. *Cordylanthus kingii* S. Wats. King birdsbeak
429. *C. parviflorus* (Ferris) Wiggins smallflower birdsbeak
430. *Mimulus guttatus* DC. common monkeyflower
431. *M. rubellus* Gray monkeyflower
432. *Orthocarpus luteus* Nutt. yellow owlflower
433. *O. purpureo-albus* Gray purple-white owlflower
434. *Pedicularis centranthera* Gray dwarf loosewort
435. *Penstemon bracteatus* Keck Platy penstemon
436. *P. caespitosus* Nutt. ex Gray mat penstemon
437. *P. comarrhenus* Gray dusty penstemon
438. *P. eatonii* Gray firecracker penstemon
439. *P. leiophyllus* Pennell Markagunt penstemon
440. *P. rostriflorus* Kellogg beaked penstemon
441. *P. rydbergii* A. Nels. Rydberg penstemon
442. *P. strictus* Benth. Rocky Mountain penstemon
443. *P. utahensis* Eastw. Utah penstemon
444. *Verbascum thapsus* L. flannel mullein
445. *Veronica americana* Schw. American brooklime
- SINOPTERIDACEAE
446. *Cheilanthes feci* Moore slender lipfern
- SOLANACEAE
447. *Solanum triflorum* Nutt. cutleaf nightshade
- TAMARICACEAE
448. *Tamarix ramosissima* Ledeb. salt cedar, tamarisk
- VALERIANACEAE
449. *Valeriana acutiloba* Rydb. cordilleran valerian
450. *V. edulis* Nutt. taprooted valerian
- VERBENACEAE
451. *Verbena bracteata* Lag. & Rodr. prostrate vervain
- VIOLACEAE
452. *Viola adunca* J. L. Smith blue violet
453. *V. purpurea* Kellogg pine violet
- VISCACEAE
454. *Arceuthobium cyanocarpum* Coult. & Rose. lumber pine dwarf mistletoe
455. *A. divaricatum* Engelm. pinyon pine dwarf mistletoe
456. *A. douglasii* Engelm. Douglas dwarf mistletoe
457. *A. vaginatum* (Willd.) Presl. southwestern dwarf mistletoe
458. *Phoradendron juniperinum* Gray juniper mistletoe

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